

FOLIO

Research Prize Night Honors Professors Fishwick and Madsen

The Annual Research Prize Award Night is essentially an evening *pro bono publico*. This year's audience will gain insights into the underpinning of the Roman Empire and experience a reasonably close encounter with enzymes, those intriguing architects of chemical change. Afterward, speakers Duncan Fishwick, Professor of Classics, and Neil Madsen, Professor of Biochemistry, and listeners can get together informally at a reception. It

will all take place Wednesday, 20 March, in SUB Theatre beginning at 8 p.m. As in the past, the lectures (and accompanying slides) are tailored to a general audience.

Dr. Fishwick, will talk about "The Roman Imperial Cult." Dr. Madsen, has entitled his lecture "For the Love of an Enzyme." The occasion will also allow the two scholars to meet for the first time.

"It is a fascinating mixture of sub-

jects once again," says J. Gordin Kaplan, Vice-President (Research) and the initiator of the Prizes. (Previous winners were Leslie Green and Raymond Lemieux, 1982; Norman Page and Werner Israel, 1983; and Gerhard Krapf and Norbert Morgenstern, 1984.)

The underlying idea of the prizes (one rewards outstanding work in the general areas of the humanities and social sciences; the other, the sciences and engineering) is to "make truly outstanding research and scholarship visible outside as well as internally," Dr. Kaplan told *Folio*. The recipients, each of whom receives a plaque and a cheque for \$2,500, have taken audiences on guided tours of the gamut of scholarship and scientific research, ranging from black holes (Dr. Israel) to Bach's choral preludes (Dr. Krapf).

Selecting this year's recipients was

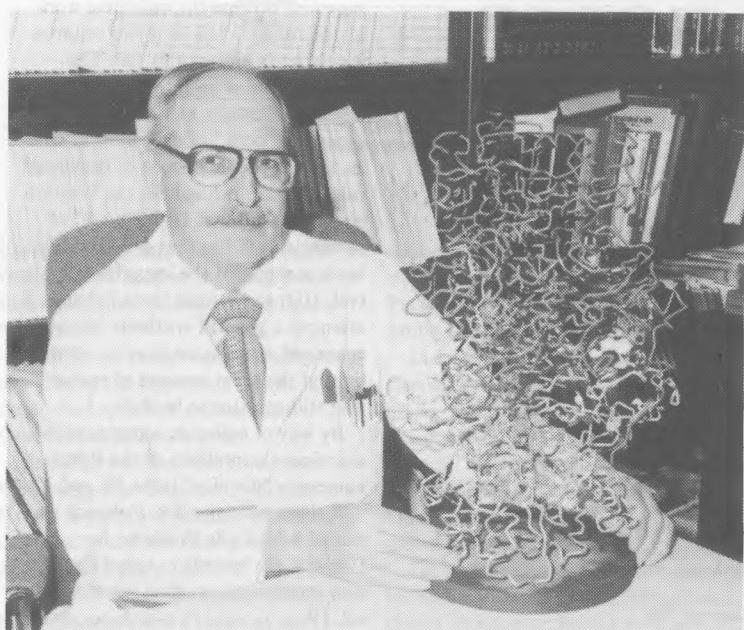
again a difficult task because of the large number of exceptionally qualified candidates, Dr. Kaplan related. (Each Faculty can nominate one candidate except Arts which can nominate two candidates because it has departments that can compete for either of the two prizes. The recipients are chosen by a jury consisting of the convenors of seven specialty working groups of the University Research Awards Committee, one representative of the Graduate Students' Association and two "outstanding" individuals from the community at large. This year's jury included Glen Buick, Assistant Deputy Minister of Alberta Culture's Cultural Development Division, and Alan Vanterpool, Director of the Alberta Research Council's Office of Science and Technology.

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Duncan Fishwick

University of Alberta



Neil Madsen

Duncan Fishwick

Roman history, in particular the local history of western provinces in the Roman empire, has long fascinated Dr. Fishwick. It is, he says, an original type of research although the base is familiar. Since there is not a bundle of literary evidence on the imperial cult, Dr. Fishwick works largely with inscriptions, coins and iconographical fragments from edifices such as temples, altars, amphitheatres, etc. He has, for example, gotten to know personally one of the most important centres for the emperor cult in the Latin West—the Spanish town of Tarraco. He has also scoured the available literature and makes it his business to fit the findings of local archaeologists into a greater historical context.

The imperial cult was the principal means by which the Romans tried to promote loyalty to the central regime throughout their vast empire. The attitude of successive emperors to the device is relatively well known but how exactly did the cult take root in individual provinces? Was it a spontaneous growth or imposed officially from above? What were its specializations and what did the practice amount to in the end?

The imperial cult was not a religion but a way of inducing subjects to

honor the Emperor by, in today's terms, creating an image of him as being a superman, an individual of charisma and force. The image had to be imbedded in people's minds through the medium of coins and statues because the great majority of them would never see the Emperor face to face. Could the Madison Avenue sharpies accomplish the same today without benefit of television, periodicals, billboards, etc.?

The Roman hierarchy did a masterful job of public relations, for as Dr. Fishwick has found, the imperial cult did more than the army to perpetuate the greatness of the empire.

Spells, riddles, cults and idiosyncrasies have drawn Dr. Fishwick deeper and deeper into the Roman imperial cult. Annual excavations steadily increase the available evidence as more and more fragmentary material is unearthed. Whereas modern history, Hitler's Germany, for example, is documented by warehouses of data, much of Roman history depends upon bits and pieces which do not really fit together.

Magnum Opus

Dr. Fishwick estimates that enough material exists to write as many as 50 or more books. "People believe that Roman history has happened once and for all but new evidence can fault what was thought to be perfectly correct before," he says. What he will be publishing is *The Imperial Cult in the Latin West*, a five-volume project that may well become the definitive work on the subject. The first two volumes should be published this fall. The work consists of an introduction on the Greek, Hellenistic and Republic background; a "book" of epigraphical studies tracing the institution of provincial ruler-worship throughout the Western empire (vols. I and II); a "book" of theological studies that deal with the basic concepts of the imperial worship (vol. III); and a final "book" that attempts a general synthesis but is conceived more as an interim report in light of the great amount of research that still remains to be done.

By way of epilogue, a monograph examines the problem of the Roman emperor's "divinity" (vols. IV and V).

A short time ago, Dr. Fishwick was named a McCalla Professor for 1985-86. He intends to spend the nine-months release time working on vol. IV.

His main concern in vols. I and II is

with the installation and development of the imperial cult in the Western, that is, the Latin-speaking provinces of the Roman empire in the period from Augustus down to the Severi.

Dr. Fishwick is also at work on a number of articles on individual related topics, but beyond these he hopes to complete several volumes of documents (inscriptions, coins, iconography, literary passages) which will present a representative selection of the sources one has to work with. One such source is the monuments attesting to the worship of Roman emperors in Tarraco, Spain.

Prior to being appointed to this University's faculty in 1971, Dr. Fishwick taught at McGill University, the University of Toronto and St. Francis Xavier University. He currently teaches a number of undergraduate and graduate courses in Classics and Latin, including "Introduction to Rome and the West," "History of the Roman Empire," "Beginners' Latin" and "Latin Authors and Prose Composition."

Interest in Classics is by no means on the wane, he says. On the contrary, there are, at our University, more than 2,000 students enrolled in Classics courses. Like the games of soccer and cricket at which, incidentally, he represented the University of Manchester in his student days, the study of Classics is more prevalent in Europe but it is making inroads in this country. In terms of the imperial cult, however, Dr. Fishwick says that to his knowledge, no one else in Canada is engaged in its study.

An illness at the age of 20 curtailed his soccer and cricket pursuits but he remains a keen golfer, whose swing may be helped by the yoga with which he starts each day. At 48, he took up downhill skiing. "I will always be interested in sport; in fact I find it impossible to work without doing sport."

Dr. Fishwick has lectured at international colloquia held at Perpignan, Grenoble and Montpellier, France, as well as at the Eighth International Congress of Greek and Latin Epigraphy (Athens), the Kommission für Alte Geschichte und Epigraphik (Munich), the Seminar für Alte Geschichte of the University of Heidelberg, and hopes next year to take up invitations to lecture at the University of Paris and the Ecole Normale Supérieure.

Both he and Dr. Madsen are Fellows of the Royal Society of Canada.

Neil Madsen

Dr. Madsen is thankful for the tendency in academic circles for a student with promise to get passed from one professor to another. After earning the BSc degree in Agriculture at this University in 1950, and an MSc in Biochemistry in 1952, Bruce Collier, Chairman of Biochemistry, recommended him to Carl Cori, a scientist whose lab at Washington University in St. Louis was world famous for the study of enzymes. Dr. Cori promptly assigned young Madsen to work on glycogen phosphorylase, a critical enzyme of carbohydrate metabolism. The enzyme, which was discovered by Cori in 1936 and subsequently purified and crystallized by Cori and his wife, Gerty, is responsible for initiating the breakdown of glycogen (starch) in animal cells. It is now known that its activity is subject to an intricate set of hormonal and metabolic control mechanisms.

Working at the feet of the master (Cori was awarded the Nobel Prize in 1947) Neil Madsen discovered that the enzyme is composed of identical sub-units, and that the activity of the sub-units can be stimulated in a cooperative manner by the activating natural metabolite, adenylic acid.

The time with Cori in the mid-fifties had much to do with Dr. Madsen's development as an enzymologist. "You have to see how it's actually done, you can't get that from reading or working in isolation."

After a year as a post-doctoral fellow in the Oxford laboratory of Sir Hans Krebs, Dr. Madsen worked as a microbiologist in Canada Agriculture's Research Institute in Ottawa for five years. He also began to return to the question of control of glycogen metabolism through phosphorylase.

He joined the Department of Biochemistry here in 1962 (the facilities were then in the Dentistry/Pharmacy Building) and immersed himself in the regulation of enzymes.

When you hit the big time you don't have to beat the bushes in search of funding to continue your research. In this regard Dr. Madsen has enjoyed the generous support of the Medical Research Council as well as that of the Alberta Heritage Foundation for Medical Research. He is also appreciative of the "tremendous amount" of collaboration that exists in the Department of Biochemistry. He

FOLIO

Volume Twenty-one
Number Twenty-nine

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The Office of Community Relations produces Folio on a regular basis for the staff and other interested persons. Folio contents may be reprinted with acknowledgment.

ISSN 0015-5764

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likens the department to a research institute, emphasizing that a number of projects would simply not be possible on an individual basis. Dr. Madsen has joined forces formally with at least a half dozen professors. "If you want to do a project and don't have the necessary techniques, others can and will assist you."

His research has continued to focus on the enzyme glycogen phosphorylase, producing an evolving picture of the relationship of the structure of this enzyme to its remarkable catalytic and regulatory properties. This began with analyses of the kinetic properties of phosphorylase, and probes of the structure of the enzyme by chemical and biophysical techniques. Despite progress that attracted increasing interest around the world, by approximately 1970 Dr. Madsen began to express his frustration at the incomplete descriptions of the enzyme molecule that this technology could provide. Detailed representations of the structure of enzyme molecules, and of the precise location of binding sites for substrate and regulator substances, could be provided only by the application of the techniques of protein X-ray crystallography. There was a problem in the application of crystallography to an enzyme the size of glycogen phosphorylase however, at least in the eyes of other investigators. At that time, only about a dozen protein structures had been determined by protein crystallography, and these were typified by much smaller proteins such as hemoglobin and by small, extracellular and stable enzymes such as those of the pancreatic secretions, trypsin and chymotrypsin.

The largest enzyme that had been investigated by these techniques was about one-third the size of phosphorylase, and the advice of the experts was that this approach to the problem was not feasible with then-current technology. Literally undaunted, Dr. Madsen proceeded to assemble a small group of collaborators, including in particular Robert Fletterick, to undertake the X-ray crystallographic study of phosphorylase. "The results of this investigation, which took the better part of a decade to complete, were spectacular," says John Colter, Chairman of Biochemistry. This study produced a detailed three-dimensional map of the structure of phosphorylase, still by far the largest enzyme so described. But be-

yond that, it provided for the first time a structural basis for the phenomenon of regulation of enzymatic activity: the location of the active site was identified on the enzyme's surface, and so were the sites for interaction of the enzyme with its regulatory effectors and for its phosphorylation that is in turn promoted by hormonal stimuli. The three-dimensional structure showed how these sites could communicate by means of conformational transitions, providing the structural rationale for enzyme regulation that is now profusely illustrated in every modern textbook of biochemistry. The structural information has many other important implications. It allowed Dr. Madsen and his colleagues to develop a new detailed model for the down-regulation of the enzyme by hormonally responsive phosphatases. It led to the discovery of a new specific regulator of phosphorylase, namely caffeine. And significantly, it provided information about the location of amino acid and coenzyme side chains at the active site, which together must provide the chemical machinery to enable the enzyme to catalyze the breakdown of glycogen.

New Thrust

This latter point opened up a new phase of research activity on the mechanism of catalysis. Drawing on inferences from the structure, Dr. Madsen and his collaborators, Drs. Withers and Fukui, synthesized analogues of the putative transition state. The nature of the interactions between these analogues and the enzyme have provided strong support for a novel mechanism of catalysis in which the phosphate group of the vitamin B6-derived pyridoxal phosphate at the active site acts as a direct participant in catalyzing the breakdown of glycogen.

He is now phasing out his study of phosphorylase having "long since reached my level of incompetence with this enzyme."

Other enzymes associated with the metabolism of glycogen are now being crystallized and structure determinations by X-ray crystallography are under way.

According to Dr. Colter, Neil Madsen has become "somewhat of a statesman of science." A former President of the Canadian Biochemical Society and Chairman of the Board of the Canadian Federation of Biological

Societies (CFBS), he served as Chairman of the Science Policy Committee of the CFBS during a period of drastic shortfall for research funding. This led to the establishment of a vigorous and effective lobby for the support of science by government which is still operating today, Dr. Colter said.

Discussing the Research Prize itself,

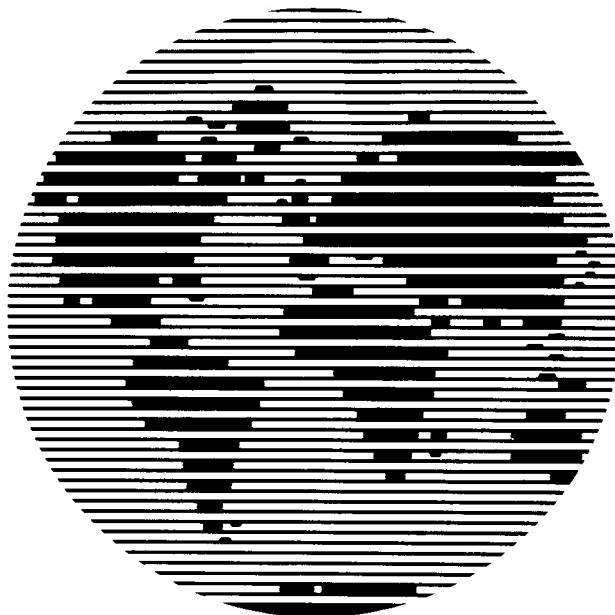
Dr. Madsen said he is delighted to have "been recognized by my own." He recalled that when Raymond Lemieux accepted his Research Prize, he remarked on that special feeling that comes from being recognized by one's own University. "I feel the same way." □

'Canada . . . Welcomes One and All

A conference full of interest for the general public as well as for University staff and students, "Canada, the World and the Future" offers an eclectic program addressed by a variety of speakers.

Topics range from the problems of

Barry Cooper was manager of the largest municipal recreation and parks maintenance operation in Canada and now is partner in a training consultants group concerned with management, productivity improvement and personal development.



unemployment through international relations and nuclear threats to abortion, biomedical technology and popular culture.

There is no charge for admission to any part of the conference. Some of the invited speakers and commentators are described below.

Reg Basken, National Director of the Energy and Chemical Workers' Union, is an active member of the community and has been involved in union affairs since 1957.

Wytze Brouwer, Professor of Science Education and Physics at our University, is Chairman of the Edu-

cation Division of the Canadian Association of Physicists and a member of Pugwash Canada and the Peace Education Institute, University of Alberta.

Douglas Cox is President and Chief Executive Officer of Branjeff Holdings in Edmonton. He also serves as Chairman of the Business Advisory Council, a select group of public and private sector leaders who donate their time to strengthen management programs at the University.

Tanya Hughson, is a former member of the Calgary Pro-Life Board and speaks on abortion from a very per-

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David Cook Suggests How to Approach Lecturing to Large Classes

Speaking at a CITL-sponsored workshop last week, David Cook, Chairman of the Department of Pharmacology, said that a large audience restricts interaction between professor and student. It is important to take into account the broader background of the larger audience and to try to engage these wider interests in the approach to the subject.

Organization is what Dr. Cook strongly recommended, and he suggested using key headings in notes, so that "you can 'whiz' through the material." But pace should, of course, be adjusted to the difficulty of the subject matter. In any case, the first minute or two should be taken slowly to give students time to adjust. Then lecture pace should be stepped up, since students' attention flags towards the end.

It is important to know the extent of students' background knowledge, Dr. Cook suggested, and a good way of finding out was to contact whomever had taught the prerequisite.

Students need to know what they are going to be doing, how they will be examined, and what they will be expected to know when they have completed the course. It is helpful, Dr. Cook felt, at the start of a lecture to recap some of the highlights of the last class, and to outline subjects to be covered that day. Then divide the lecture into sections, he suggested, and write section headings on the board. Students will be able to follow closely as the lecture progresses.

Follow the lecture plan, Dr. Cook urged, and if it is necessary to backtrack, then at least complete a section before going back to add to an earlier one.

On technique, Dr. Cook advised his audience to speak up when facing the board—or shut up till facing the students again; to become competent in using audio-visual machines—which he felt should only be used in special circumstances; to overcome stage fright by memorizing introductory notes; and to be punctual—or risk students arriving even later.

Case studies or anecdotes, interjected every ten minutes or so, personalize the learning, he said. Students will remember material that has been attached to reality, such as a

professor's personal experience—especially "if the professor is 'goat', not hero!" But," he advised, "be neither too funny nor too subtle in your humor—and sexist jokes are an absolute no-no."

Dr. Cook regarded questions as a vital part of the lecture, to be both given and taken; they should be introduced periodically into the lecture, and students' questions should be repeated so that the whole class can hear. Students should be asked to

rephrase incomprehensible questions—and all questions should be taken seriously, even apparently stupid ones. "And if you don't know the answer to a question, be honest," said Dr. Cook. "Offering to find out the answer for the next class will not lose you your credibility."

If students are noisy, "take the blame," Dr. Cook suggested, "by telling them you can't concentrate with all the background noise." And if

students persist in being disruptive, "nail them," is his advice, "but keep your cool no matter what the provocation."

Students should be given the professor's name, address and phone number in the first lecture. Office hours should be set and visits encouraged. "Try and see the student and the professor as learning together—it makes for a good relationship," Dr. Cook concluded. □

Scholarship Winners Meet Corporate Benefactors

Norcen Energy Resources Limited hosted a luncheon on campus last week to demonstrate the important partnership that exists between the corporate community, the University and the government—a partnership Norcen have recognized through their generous donation of ten \$1,000 scholarships for students in Engineering, Geology, Geophysics, Computer Sciences and Accounting.

The corporation has also created a \$6,000 annual fund over five years to purchase books for the libraries of these Faculties, the acquisitions to be called the "Norcen Collection."

The scholarships were awarded for the first time in the 1984-85 academic year, and the luncheon, held in the Stollery Centre, was an exciting opportunity for the scholarship winners to meet the corporate donors in person.

Representing Norcen were Don Barkwell, Executive Vice-President; Ken Colby, Vice-President, Corporate Affairs; Wayne Newhouse, Vice-President, Production; and Ian Seph, Manager, Corporate Affairs. University guests included Vice-President Leitch, Allan Holender, Director of Fund Development, and Peter Freeman, Chief Librarian and Director of Libraries, as well as representatives of the Faculties receiving the scholarships.

Rollie Cook, MLA for Edmonton-Glengarry, attended on behalf of the provincial government; in matching a portion of the donation, through its

matching grant program, the government offers incentives for private support of the University.

Seven scholarship winners were able to be present: Donald C. Allen, Mechanical Engineering; Stuart P. Hamilton, High Technology Communications; Graeme N. Jones, Computing Science; Christopher M. Kean and Robert G. MacCuish, Engineering; and Wanda M. Opheim and John B. Wilson, Accounting. Unable to be present were Lawrence Le, Geophysics, and Paul Szczepanski, Civil Engineering. The tenth scholarship will be awarded next year.

Winding up the occasion, Vice-President Leitch congratulated Norcen on being one of the very first corporations to embark on a program of this kind, combining scholarships and

a capital gift. It is this kind of cooperation, he said, between University, industry and government that will make the difference between having a program that is just good and a program that is excellent.

Norcen, said Don Barkwell, was very appreciative of the opportunity to become involved with this unique interface between the University, the corporate community and the students.

This feeling was heartily reciprocated by scholarship winner Wanda Opheim, who was delighted to be able to meet the people who were the corporate benefactors of her scholarship; students had received background information on the company ahead of time, and this meeting now enabled a more personal and interested relationship with the donor, she felt. □

Search Committee for Chancellor of the University

The GFC Nominating Committee is seeking nominations for three members of General Faculties Council to serve on the above Search Committee, which will commence its work early in September. Search Committee membership is open to all members of Council, including students.

Would those who have suggestions for nominations, or who are interested in serving on the Search Committee for Chancellor please contact the Secretary of the Nominating Committee, Pamela Plaskitt, at 2-5 University Hall, 432-4715.

'Quite Peculiar to Canada'

Minority Language Education Rights and the Constitution

In reference to Quebec's much discussed *Bill 101*, a recent Supreme Court judgement stated in part that the special provisions of Section 23 of the *Charter of Rights and Freedoms* "make it a unique set of constitutional provisions, quite peculiar to Canada." The implications of Sections 23 and 15 of the *Charter* have yet to be plumbed in depth. There is no doubt, however, that their provisions will have a significant impact on educators as they pay ever more attention to "minorities" in Canada and design programs and structures to accommodate their educational needs. Such is the basis for a one-day conference to be held on 22 March at the Chateau Lacombe sponsored by the Department of Secondary Education and the Faculty of Law with financial assistance from the Secretary of State.

The major thrust of the conference is to increase awareness among educators not only of the issues raised by Sections 23 and 15 of the *Charter* but also of their legal implications in the hope that they will be better able to

guide future changes in this area.

The speakers are knowledgeable, experienced, and forthright. Their topics will cover in close detail the current state of things and options for the future. Pierre Patenaude (University of Sherbrooke) will address the contents of Section 23 and the issues it raises; Brian Crane, QC (Ottawa), will discuss the Ontario experience and that province's Supreme Court's judgement on Section 23; Anne McLellan of our own Faculty of Law will examine the significance of Section 15 as it relates to Section 23; and John Mallea (Ontario Institute for Studies in Education) will consider "Alternatives for the future of educational structures." All in all, with informed observations by Albertan scholars such as Ted Aoki, Bruce Bain, Myer Horowitz, Gerry Gall, Magaret Van de Pitte, Angéline Martel, and Ken Jacknicke, the conference promises to be as stimulating as it is topical.

Anyone who is at all interested in minority language education rights

should make plans to attend. The registration fee is \$25. Further information and registration forms may be obtained from Wallie Samiroden, Chair of the Public Relations Committee, Faculty of Education, 338 Education

South, T6G 2G5. Cheques should be made payable to "Constitution Conference Funds" and should be received by Dr. Samiroden no later than 15 March. □

Students Hone Range Management Skills in Salt Lake City

Five undergraduate students representing the Faculty of Agriculture and Forestry attended the Society for Range Management Conference 10 to 15 February in Salt Lake City, Utah. They participated in two student competitions—the Comprehensive Range Management Exam and the Plant Identification Contest. The University of Alberta is the only Canadian university that sends students to compete. Other schools are from the United States and Mexico.

Our University's contingent consisted of Mike Bokalo (Forest Science), Jim Gray, Robin Lagroix, Isabel Simons (Grazing Management) and Carolyn Slater (Plant Science). Their coach was Mary Jane Davies, Department of Plant Science. The students placed fifth out of 17 universities in the Range Management Exam. The 29-page exam was made

up of multiple choice and problem questions and students were given 100 minutes to complete it.

The University of Alberta was fourth out of 22 universities in the Range Identification Contest. The team score was 92 percent. Students had to know the family or tribe, genus, species, longevity and origin of 200 plants (half of which are grasses). The test was a minimum of 100 plants with no limit to duplication; students had 55 seconds to identify each specimen.

Gratitude is expressed to the Dean of the Faculty of Agriculture and Forestry, the Chairmen of the Departments of Plant Science and Forest Science, the Agriculture Club, the Forestry Society, Canada Safeway and Farm Credit Corporation for providing funding to help defer expenses. □

The Lucky Three Hundred

"O, what a world of vile ill-favour'd faults
Looks handsome in three hundred cars a year!"

Jim Shakespeare, *The Merry Drive of Windsor*.

Now that 300 people have been allowed to return their vehicles to Stadium Carpark, while repairs to that infamous structure are still being carried out, it may be worthwhile to review other lucky groups in history. Remember the 300 Spartans under Leonidas at Thermopylae? "Stranger, go tell the authorities that we lie buried here faithful to their words." Or how about—when more spaces are made available—that incident in the Crimean War? "Into the valley of Death drove the six hundred." Even in our own time—and in the same place—there have been lucky people. Remember the rustproofing carried out free of charge when GSB's roof was fixed?

We wish that were all: But what about vehicular adornment by means of snow removal, dodgem cars on Level Two (or was it Level Three, Brian?), and sandstorms in 1978? Why, the situation once got so bad that, under the obviously false pretext of saving wear and tear on glass in the elevated walkway, steel barriers were erected as a deterrent to using the carpark on weekends. Then there was the shootout just next door in 1981. Seriously, why do you think Parking Services pulled out from an adjacent building and moved to the relative safety of the Education Carpark?

Let's leave the last word to Al Belloc, Associate Vice-President (Facilities and Services), overheard recently in the recesses of University Hall:
"We also know the sacred height
Up on Stadium side,
Where those three hundred parked
with Jim
And fair young Wernher died." □

General Faculties Council

Dean T.H. White will be replacing Dr. Coutts as academic staff member on General Faculties Council, it was announced at the 25 February meeting. However, GFC members have been asked to extend Professor Coutts' term until the University is notified that the necessary Order-in-Council appointing Dean White as his replacement has been effected.

A recent *Edmonton Journal* article, criticizing the University's pleas for further government funding, was raised by Science student Ken Bossman. In response to his query, Dr. Horowitz commented that the information provided about the budget is accurate, and that the University will

stand behind it.

New members Wesley Oginski (Education-1) and Colleen Freeman (Education-2) were welcomed, and the reports of the Board of Governors and the Nominating Committee were then heard and accepted. During discussion on the latter, Dr. Horowitz took the opportunity to emphasize the importance of student involvement on General Faculties Committees, adding that "we need input from all quarters."

New business included the acceptance of annual reports from the Committee on Administrative and Professional Officers (APO Committee) and the Council on Student Services. □

Continued from page three

sonal viewpoint: she, herself, has had an abortion.

Ernie Isley, Alberta Minister of Manpower, was elected to the Alberta Legislative Assembly in March 1979. He has served on the Education Caucus Committee, the Select Committee of the Legislature on Surface Rights and the Curriculum Policies Board.

John Kirton is an authority on Canadian foreign policy, with particular regard to the U.S. and the Middle East.

Gertrude Laing, a former Chairman of the Canada Council, served as Commissioner on the Royal Commission for Bilingualism and Biculturalism and on the CRTC.

Amanda Le Rougetel's political experience with student issues lead to her active role within the women's movement. She is a founding member of "Hecate's Players," a feminist theatre group.

Roy Neehall, citizen of Trinidad and Tobago, now lives in Edmonton as a member of an international team working in North American churches to raise awareness of Latin American and Caribbean issues.

Marvyn Novick, Dean of the Faculty of Community Services at Ryerson Polytechnic Institute, is a social policy thinker, educator and community leader, and writer and consultant on the future of the welfare state, changing structures of work and family support and community care.

Thomas Preston, Professor of Medicine, cardiology specialist and author of numerous publications, has written on "The Case Against the Artificial Heart" and "Baby Fae: The Ethics of Medical Adventurism."

Jim Stark founded Operation Dismantle, an organization dedicated to launching a world referendum on disarmament. In 1983 and 1984, the organization fought against cruise missile testing all the way to the Supreme Court of Canada.

All sessions will take place in Bernard Snell Hall (Level 1), Walter C. Mackenzie Health Sciences Centre. Enter via the main entrance on 114 Street or the south entrance off 83 Avenue. □

Political Science Reading Room Dedicated to Memory of R.E. McKown

On 11 February, the Political Science Reading Room was dedicated to the memory of Roberta E. McKown. Professor McKown, who died of cancer one year ago, joined the University of Alberta staff in 1968 and was Chairman of the Department of Political Science from 1975 to 1982.

Her husband, Thomas W. Mapp of the Faculty of Law, presented a picture of Professor McKown and a scroll to the Reading Room, and an engraved gavel to the department. President Myer Horowitz dedicated the Reading Room and received the gifts. Peter Meekison, Vice-President (Academic) and Professor McKown's predecessor as chairman of the department, eulogized Professor McKown in a brief address. The proceedings were moderated by F.C. Engelmann, the current chairman, and a number of colleagues, mostly from the department and the Faculty of Arts, attended.

The Roberta E. McKown Reading Room is open from 9 a.m. to 4 p.m., Monday through Friday. □



F.C. Engelmann, flanked by (from left) Dr. Horowitz, Thomas Mapp and J. Peter Meekison, had more than a hand in the dedication of the R.E. McKown Reading Room.

Marcus Karel to Address Food Science Enrichment Series

Marcus Karel, Professor of Food Engineering, Massachusetts Institute of Technology, will be on campus 14 and 15 March to deliver lectures in the Food Science Enrichment Series. His visit is funded by the Endowment Fund for the Future, Faculty of Agriculture and Forestry.

Dr. Karel, who has co-authored many books in the area of Food Process Engineering, will present two seminars on the following topics:

- 1) "Progress in Food Technology: a status report and a look into the future." (Thursday, 14 March, in Tory Breezeway (room 2) at 11 a.m.)
- 2) "Control of diffusion in low and intermediate moisture foods." (Friday, 15 March, in Tory Breezeway (room 2) at 11 a.m.)

He also will be available between 9:30 and 10:30 a.m. on 14 March for

informal discussion on other topics, including "Feeding humans in space," "Kinetics of food reactions" and "Reactions initiated in foods by Lipid ox-

idation." For further information on Dr. Karel's visit, readers are invited to call Gour Choudhury, Department of Food Science, at 432-2876. □

Notice Regarding Benefits Claims

In the event of a mail strike, it will be possible for staff to submit their claims for dental, prescription and medical cost reimbursement to the insurers through the Office of Pension and Benefits Administration. Cheques will then be returned to the claimants through this office (and subsequently through Campus Mail), provided the claimant's campus address is placed on the claims form.

All claims are dealt with in a strictly confidential manner. For further information, call Pension and Benefits Administration at 4756 (Academic staff claims) or 5634 (Non-Academic staff claims). The Office of Pension and Benefits Administration is in 302 Assiniboria Hall.

Services offered by Department of Technical Services

The Department of Technical Services provides a variety of services to all University departments. Technical Services consists of nine divisions, and the services of each are listed below.

Audio Visual Services

(L2-6A Humanities Centre)

Supervisor: D. Patten	3923 or 2183
Equipment may also be picked up at CW005 Biological Sciences Building	4962
and LB-9 Tory Building	3923

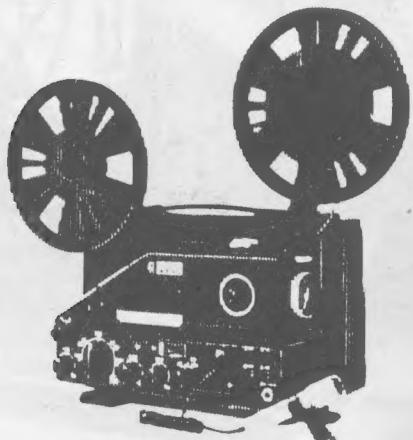
Services Available

1. The following equipment is available for short-term loan to all departments:

35 mm slide projectors
16 mm movie projectors with magnetic or optical sound; automatic, manual and slot-load 3 1/4 x 4 1/2 slide projectors
Opaque projectors
Overhead projectors
Filmstrip projectors
Portable public address systems, megaphones and microphones
Projection screen and stands
Record players (stereo monophonic)
Slide-tape synchronizing systems
Cassette tape recorders (portable and classroom)
Reel tape recorders (stereo and monophonic)
UHER 4000 and 5000 recording machines/transcribers

2. The following services are available at no charge to departments:

Advice and assistance on the purchase of AV equipment
Seminars and presentations on how to operate AV equipment



Instruction of staff and students on proper operation of theatre projection equipment (for scheduled classes only)

3. The following services are available at cost to departments:

Provision of projectionists for 16 mm film and 35 mm slide presentations
Operation of public address and sound systems
Audio recording of meetings, lectures, and seminars

Facilities Available

Audio Visual Services operates the Humanities AV Centre, a facility available to all departments. The centre is located on the second floor of the lecture wing of the Humanities Centre and contains 24 study carrels equipped with audio players, video players, slide/sound units and film strip units. The centre also contains a film preview room with a seating capacity of 20. Audio visual materials may be left in the tape library in the centre, where students and staff may draw them, and during normal working hours use them in the centre

Hours of Operation

Audio Visual Services operates from 8-12 & 1-4:30 during the winter, and from 8-12 and from 1-4 during the summer. It is closed weekends and holidays, and persons requiring services outside normal hours should consult the Supervisor, Derek Patten.

Electronics Division

ENGINEERING DESIGN SECTION

Supervisor: Wm.L. Diachuk	
M. Magera P.Eng. (Micro-processor hardware and software design)	
248 Chemical/Mineral Engin Bldg.	4901

Services Available

1. Design and construction of:

- micro-computer based data acquisition systems
- micro-processor control systems
- mini-computer interface
- specialized electronic equipment as required
- printed circuit boards single and double sided

2. Facilities for:

- digitizing analog signals and recording on 9 track IBM compatible tape
- programming a variety of proms on a data I/O system 19
- software development for a variety of micros with emulators for 8080 and 1802. Tektronix 8002A system utilized.
- technical advice and assistance in above area

Electronics Division

MAINTENANCE SECTION

Supervisor: Wm.L. Diachuk
248 Chemical/Mineral Engin Bldg. 4901

1. Services Provided:

- a. repair of computers and peripherals, e.g., terminals, discs, word processor (WT78), decwriters, etc.
- b. repair of scientific analytical equipment, e.g., gas chromatographs, ir analyzers, liquid scintillation counters, spectrophotometers, etc.
- c. electro-mechanical and refrigeration repairs on scientific lab equipment, e.g., centrifuges, waterbaths, cooling coils, freeze dryers, etc.
- d. repair of autoclaves, washers, environmental chambers
- e. installation and repair of intercoms, pa's, computer patch panels, cables, etc.
- f. stock of electronic parts and spare components valued at \$130,000
- g. service contracts for maintenance and repair of equipment available to any department
- h. electronic technologists available on loan basis for short or long term
- i. etching of printed circuit boards, single and double sided
- j. advice and assistance on technical problems, purchases, etc.

8. Gauging

- (a) "Scherr-Tumico" model P1600 Optical Comparator with photo print facility
- (b) Registered Double "A" standard surface plate and gauge blocks in temperature-controlled room

9. Polishing

- (a) Mechanical buffing

10. Shot-blasting—Shot blast machine has a chamber size of 48 in. x 30 in. x 38 in.

Microscope Repair

Supervisor: E. Vincze
105 Art Workshop I 2449

Services Available

- 1. Maintenance and repair of microscopes
- 2. Maintenance and repair of balances
- 3. A preventive maintenance program is available to any department wishing regular servicing of microscope and/or balances
- 4. Repair of electrical meters (movements only)—voltmeters, ammeters, etc.
- 5. Maintenance and repair of field surveying equipment

Office Equipment Repair

Supervisor: D. Millar

130 Chemical/Mineral Eng Bldg 4901

Services Available

- 1. Maintenance and repair of
 - (a) all makes of electrical and mechanical typewriters
 - (b) all makes of dictation equipment and small tape recorders
 - (c) all lines of electronic calculators (where we are unable to service electronic calculators, we will handle the servicing through the distributor if the department wishes)
 - (e) spirit duplicators
 - (f) small photocopy printers
 - (g) microfilm readers and printers
 - (h) small office accessories
- 2. Loan machines available for many makes while your machines are being repaired
- 3. Machines available for rent
- 4. Advice on all makes of new typewriter requirements



Photographic Services

Supervisor: D.R. Spearing

106 Temporary Lab Building 4185 or 4186

Services Available

1. On location photography, prints and slides in color and black and white
2. Studio photography, including portraiture, passport service, visa and application photographs in color and black and white
3. Copy work. Production of slides and prints from original material
4. Reproduction of slides and prints in color and black and white
5. Specialized macro and photomicrography, medical and scientific photography
6. Microfilming, two types are available: standard 35 mm strip, and system microfiche (for use with plato) in color and black and white
7. Color slide processing and mounting of same either in cardboard or glass mounts
8. A complete line of 35 mm cameras and accessories are available to departments at reasonable rates
9. Restoration of old photographs

Technical Services Telephone Directory

Director: W.H. Jopling

101 Art Workshop I 3302
Audio Visual Services 3923 or 2183
Electronics 4901
Equipment Inventory 3302
Glassblowing 3513
Graphics 3461
Machine Shop 4901
Microscope Repair 2449
Office Equipment Repair 4901
Photo Services 4185 or 4186

Equipment Inventory

Supervisor: L.C. Stodgell

101 Art Workshop I 3302

Services Available

1. Provision of departmental reports of equipment in a variety of formats
2. Assistance in locating equipment on campus
3. Assistance in determining custodian of misplaced or stolen equipment
4. Assistance in updating departmental equipment inventory records

Glassblowing

Supervisor: P.B. Lea

WB39 Chemistry Building, west wing 3513

Services Available

1. Design and construction of specialized scientific glass apparatus
2. Repair of glass apparatus
3. Fabrication of apparatus to your specifications

Graphics

Supervisor: J.E. Ross, Assistant Supervisor: B. Hestbak

4-31 Mechanical Engineering 3461

Services Available

1. Presentation of graphical data for inclusion in publications, reports, theses, slides, television, and motion pictures
2. Preparation of illustrative material, including technical illustrations, architectural renderings, and free hand sketches
3. Production of visual instructional materials, such as overhead transparencies (in black and white or color), television cards, flip charts, and wall maps
4. Design and preparation of display material for departmental display cabinets, conferences, and exhibitions
5. Graphic design and production of labels, signs, brochure covers, and posters for special or limited run applications
6. Typesetting in a variety of styles (including Greek and mathematical typefaces), for illustrations, publications, theses, reports, brochures and slides
7. Color and black and white graphic reproduction services, including: direct positive line prints, for publications and theses, display material and overhead slides
8. Permanent and temporary signage using silkscreen and signpress technology on a variety of materials (paper, cardboard, acetate, plexiglass, vinyl, etc.)
9. Complete conference programs designed and produced, including such items as brochures, posters, directional signage, name tags, menus, advertisements, etc.
10. Dry-mounting facilities
11. Advice and assistance regarding visual instructional materials and graphic standards
12. Signage—The campus signage program is being co-ordinated through the Graphics Division in co-operation with Design and Construction, production and installation of temporary, permanent and safety signage is handled through Graphics. Advice and assistance in setting up signage programs for conferences and other related projects is also available

Machine Shop

Supervisor: E.F. Eichenlaub

132 Chemical/Mineral Engin Bldg. 4901

Services Available

1. Design and construction of specialized apparatus and equipment
2. Complete shop services; machining, fabricating, and welding
3. Service and repair of mechanical apparatus and equipment
4. Advice and assistance on proposed projects
5. Advice and assistance on proposed equipment
6. Modification of equipment and machines

Equipment is available to do the following:

1. Sawing

- (a) Band saw-36 in throat-depth capacity to 12 inches—contouring to 36 inches in diameter-band filing
- (b) Cut-off saw—circular capacity to 12 inches

2. Turning

- (a) largest lathe has a capacity of 13 feet between centres with a swing of 25 inches over bed and 52 inch swing in gap

3. Drilling and boring—radial drill has a 5 foot arm and drilling capacity in steel of 3 inches

4. Milling

- (a) largest milling machine has a table travel of 60 inches and a ram travel (cross) of 27 inches

- (b) Moog 3-axis point-to-point numerical control machining centre

5. Welding

- (a) Oxyacetylene

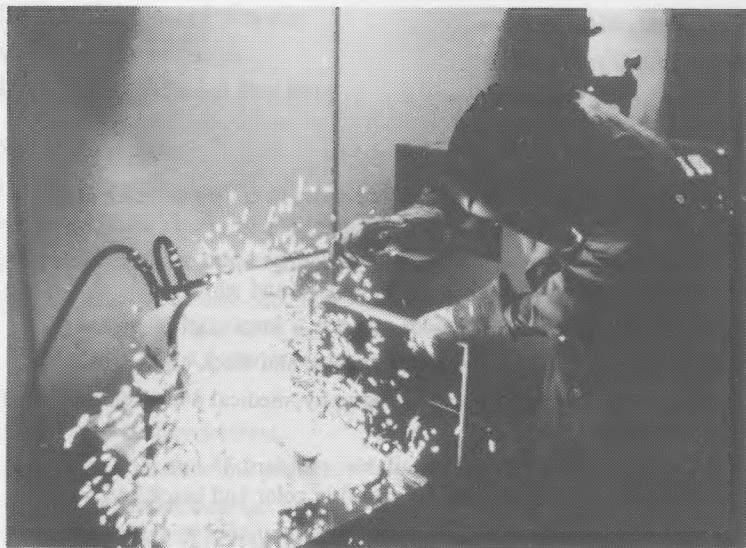
- (b) Arc

- (c) Tig. 300 amp maximum

- (d) Mig

- (e) Silver brazing

- (f) Plasma cutting



6. Fabricating

- (a) Power shearing 10 ft. x 1/4 inch capacity
- (b) Press brake 12 ft. die surface, 110 ton capacity
- (c) Hand brake, 4 ft.
- (d) Punching and notching on "Ironworker"
- (e) Bending on a "Diacro" number 8 power bender, 3/8 in. x 4 ft. flat and 1 1/4 in. mild steel bar capacity
- (f) "Pioneer" nibbler, 1/4 in. capacity
- (g) Rolling capacity 1/4 inch x 5 feet long powered rolls

7. Grinding and lapping

- (a) "Norton" tool and cutter grinder
- (b) Lapping machine, 5 in. diameter capacity
- (c) Surface grinding, 27 in. x 14 in. capacity

Advanced Education Endowment Fund Takes the '80s by Storm

Dick Johnston, Minister of Advanced Education, recently announced the successful commitment and completion of the \$80 million 1980s Advanced Education Endowment Fund. A special warrant of \$12.6 million was approved to supplement \$8 million in the budget this year, bringing the total support to \$20.6 million for 1984-85. Almost \$60 million will have been paid out to Alberta's post-secondary institutions by 31 March 1985. The balance of the \$80 million Fund will be transferred to the institutions upon receipt of outstanding donations.

The Endowment Fund was initiated in May 1980 to match dollar for dollar private sector donations to post-secondary institutions for a 10-year

period. The overwhelming response of individuals, businesses, industry, organizations, foundations, and community groups to this program has enabled the Government of Alberta to match \$80 million through the Endowment Fund in a record five years.

Mr. Johnston complimented the partnership of the private sector and Alberta's post-secondary institutions, saying that the relationship can only serve to strengthen post-secondary education in Alberta.

The Endowment Fund has encouraged the establishment of *operating* endowments of nearly \$10 million, one example being the Muttart Foundation's \$1.2 million endowment to the University of Alberta for diabetes research. The Fund has also matched

more than \$70 million in *capital* donations, including, at our University, the donation by S.A. Mactaggart of land valued at \$1.9 million and the Javitch family's gift of a collection of rare books valued at \$1 million.

"The 1980s Advanced Education Endowment Fund has been one of the most successful initiatives undertaken by this Government for the benefit of post-secondary students and institutions," said Mr. Johnston. "It is important to ensure that the private sector's support of advanced education institutions continues in the future. Therefore consideration is currently being given to the development of a successor program to continue to encourage private and public sector co-operation." □



Dean Terrence H. White, soon to be faculty representative on the Board of Governors.

Letters

Data Book a Source of Ammunition in Skirmish Over Faculty Representative on Board

■ Recent letters from Ralph Nursall and Jim Hackler to *Folio* regarding the faculty representative on the Board of Governors have caused me to be both amused and perplexed. My amusement stems from the fact that as one of the recent representatives elected to the Board I often wondered what really did go on at Dean's Council, and just how in our decentralized system were certain things negotiated before they got to the Board. It is not a bad idea to have a Dean on the Board; of the past ten academics only three have been Deans at the time of their election.

I am perplexed by Jim Hackler's comments about administrative costs for he notes, "Over the past ten years the costs of administration have risen more rapidly than costs of teaching." This is as popular a statement among academics as is "the weather is always wrong" among farmers. The *Data Book* from Institutional Research and Planning records that in 1983-84 the total operating revenues of this University plus its research grants and contracts amounted to \$275.9 million, of which 6.1 percent was spent on Administration. In 1973-74 the same total was \$80.7 million and the cost of the Administration was 6.2 percent of the total.

Relationship Between Church and University is Crux of Address

Modern universities originated and took root in the shadow of medieval cathedrals. Communities of scholars gathered in the shelter or protection of cathedrals to pursue their understandings of world and universe. For much of their history, church and university have been intimately related. But what of our age? What is the relationship of church and university in the late 20th century?

That question will be the focus of an address by Martin E. Marty when he speaks on "From the Cathedral's Shelter: Church And University into the 21st Century," on 22 March at the annual Friends of Lutheran Campus

Ministry Dinner.

Dr. Marty is the Fairfax M. Cone Distinguished Service Professor of the History of Modern Christianity at the University of Chicago. He is an Associate Editor of, and columnist within, *The Christian Century* magazine. In addition, he edits the bimonthly *Context: Commentary on the Interrelation of Religion and Culture*. He is the author of some 25 books in the fields of religious history, cultural comment and spiritual guidance. His *Righteous Empire* won the National Book Award in 1972.

In a recent poll seeking to identify

the most significant religious figures in America, Billy Graham finished second to Martin Marty.

Tickets for the Friends of Lutheran Campus Ministry Dinner (5:30 p.m., Trinity Lutheran Church, 10014 81 Avenue) are available at \$14.95 from the Chaplains' Offices, 158C Students' Union Building. Reservations may be made by phone (432-4513) or by mail and are requested by 18 March.

For further information or details, contact Rev. Stephen Larson, Lutheran Campus Pastor, at SUB-158C or 432-4513. □

A Piece of Cheese a Day Will Keep Dental Caries Away...

This is the story to be heard during the forthcoming visit of Howard Morris, an internationally renowned Professor of Food Science at the University of Minnesota. Dr. Morris, who will visit our University's Department of Food Science and the Faculty of Dentistry on 11 and 12 March, has been recognized for his vast experience in the area of cultured dairy products and cheese ripening. His latest on-going collaborative research

with the Faculty of Dentistry at the University of Minnesota has produced some startling results regarding anti-cariogenic activity of cheddar and several other cheeses.

During his visit, which is sponsored by the Alberta Heritage Foundation for Medical Research, Dr. Morris will present an information, "brown-bag" lunch seminar in 4069 Dentistry/Pharmacy Building on Monday, 11 March, at noon, and a formal seminar

on the topic "Cheese and Dental Caries" for the Department of Food Science (12 March, 11 a.m., TBW-2 Tory Breezeway).

For information on these and other activities taking place during Dr. Morris's visit, telephone P. Jelen, Department of Food Science, at 432-2480. For information on the dentistry program, call R.L. Ellis at 432-3631. □

(Whether or not we get good dollar value from each of these units is another matter currently being addressed by PACC Reviews. As each unit is reviewed, it is noted in *Folio* and we should bring forward our concerns at that time.)

We could haggle over just what is the Administration, but for budget purposes the definition is that on p. 9 of the '83-'84 *Data Book*. I suspect we'll need all of the cooperation we can get from Board members, the Administration and Faculty if we are to pull through the financial squeeze that the rest of '80s will bring.

Each Department gets a *Data Book* and it contains a lot of information about this University which as an institution of higher learning is as open as any to public scrutiny. Similarly the *Report of the Governors, 1983-84* is available from the Board's office in University Hall.

R.J. Crawford,
Faculty Representative, 1979-82

people

Edward Bishop (English) gave a paper entitled, "Finding a Space for the Self: Virginia Woolf's Manuscript Revisions to *Jacob's Room*," at the 20th Century Literature Conference in Louisville, Kentucky, over reading week.

Barbara Sawchuk (Art and Design student) was invited to a public reception/press conference in Montreal, given by Andrée Champagne, Minister of State Youth, as national winner of the design competition for the official poster of the International Youth Year. Ms. Sawchuk's poster, which was produced as an in-class project, had been initially selected as one of the three best in a competition

that was open to all Canadians between 15 and 24 years of age.

In the recent international juried Print Biennial in Krakow, Poland, 16 Canadians were selected for exhibition. Of these, six are affiliated with this University's Department of Art and Design. *Lyndal Osborne*, *Walter Jule* and *Karen Dugas* are teaching printmaking in the department. *Johann Feught* and *Marlene McCallum* are recent graduates of the master's program and *Carl Skelton* is currently a graduate candidate.

Bev Dahlby and *Doug West* (Economics) presented a paper entitled "Price Dispersion in Automobile Insurance Market," at the Center for Research on Risk and Insurance, The Wharton School, University of Pennsylvania, on 21 February. Their research on automobile insurance pricing has been funded by the Huebner Foundation for Insurance Education at The Wharton School.

service information

All information to be included in this column must reach the Office of Community Relations by 9 a.m. the Thursday prior to publication.

Lectures and Seminars

Alberta Heritage Foundation for Medical Research

8 March, 3:30 p.m. John E. Phillips, Professor of Zoology, University of British Columbia, "Cellular Actions of a Novel Insect Neurohormone in Control of Ion and Water Balance." 345 Earth Sciences Building.

12 March, 12:30 p.m. R.E.W. Hancock, Department of Microbiology, University of British Columbia, "Bacterial Outer Membrane Porc-forming Proteins Involved in Phosphate Transport." 2-27 Medical Sciences Building.

Art and Design

7 March, 5 p.m. Alan Knight, doctoral student in English, "Modernism and the Manifesto." 2-20 Fine Arts Building.

African Association of Alberta

7 March, 6 p.m. "Development and Underdevelopment in Africa." Seminar topics include "Language and Development in Africa," "The World of the Contemporary African Writer," and "Integrated Farming." Sponsored in conjunction with the International Students' Centre. 1-109 Business Building.

Faculté Saint-Jean

Le 7 mars, à 20h00. Conférence de Gilles Martel, Université de Sherbrooke, "Les écrits de Louis Riel." Salon des étudiants, Faculté Saint-Jean, 8406 91 rue (468-1254).

Geography

8 March, 10 a.m. Andrew M. Kirby, University of Colorado, "The Space Economy Concept." 3-36 Tory Building.

Boreal Institute

8 March, noon. Jan Edmonds, Wildlife Research Biologist, Alberta Fish and Wildlife, "A Comparison of Caribou at the Extremes of Their Range: The Peary and Woodland Subspecies." M-137 Biological Sciences Building.

Medicine

8 March, noon. B. Maranda, "Axonal Transport and Microtubules in the Lobster Giant Axon." SMRI Conference Room.

Germanic Languages

8 March, 2 p.m. Harald Naess, "Growth of the Soil: Defending an Old Reading." 2-05 Business Building.

History

8 March, 3:05 p.m. Wesley Wark, "The Finest of its Kind in the World: The British Intelligence System and the German Threat, 1933-1939." 2-58 Tory Building.

13 March, 3:05 p.m. Bruce Kidd, "Twenty Years of Canadian Sport History." 2-58 Tory Building.

publications



Each year, Government House is the scene of more than 300 functions. One on 25 February involved Christopher Hale, Germanic Languages, (foreground), President Horowitz (centre) and His Excellency Ola Ullsten, Ambassador of Sweden. Mr. Hale is holding a volume which is representative of the more than 70 titles which the Swedish Embassy recently donated to the Department of Germanic Languages. The Embassy, knowing of the Scandinavian program here, asked Mr. Hale to put forward some suggestions and he did so with a view to filling in the gaps in the roughly 2,200 titles held by the department. The collection, primarily in Swedish, consists of contemporary literature and language books. The value of the books will be presented to the University by Alberta Advanced Education.

Comparative Literature

8 March, 3:15 p.m. Milan V. Dimić, "Comparative Literature in Canada: The History and the Present State of the Discipline." Senate Chamber, Arts Building.

Zoology

8 March, 3:30 p.m. John E. Phillips, Professor of Zoology, University of British Columbia, "Cellular Actions of a Novel Insect Neurohormone in Control of Ion and Water Balance." 345 Earth Sciences Building.

Biochemistry

8 March, 4 p.m. Maxime J. McCall, University Chemical Laboratory, Cambridge University, "The Crystal Structure of d(GGGGCC): A Model for Poly (dG) - Poly (dC)." 4-70 Medical Sciences Building.

Edmund Kemper Broadus Lectures

8 March, 4 p.m. Juliet McMaster, "The Visible World of Charles Dickens." L-3 Humanities Centre.

Food Science and Dentistry

11 March, noon. Howard Morris, Professor of Food Science, University of Minnesota, will present an informal brown-bag lunch seminar. 4069 Dentistry-Pharmacy Centre.

12 March, 11 a.m. Dr. Morris, "Cheese and Dental Caries." TBW-2 Tory Breezeway. Both lectures sponsored by the Alberta Heritage Foundation for Medical Research.

Area Studies Committee

Africa-South Asia

11 March, noon. S.M.M. Qureshi, "Urdu Literature." 14-6 Tory Building.

Plant Science

11 March, 1 p.m. David J. Kyle, Martin Marietta Laboratories, Maryland, "Introducing the Triazine Resistant Genes into Crop Plants." 1-06 Agriculture-Forestry Centre.

13 March, 1 p.m. Alan K. Watson, Professor, Plant Science Department, McDonald College, Quebec, "Use of Plant Pathogens for Weed Control." 1-06 Agriculture-Forestry Centre.

Soil Science

12 March, 12:30 p.m. T. Martin, "Effect of Continuous Forage Crop Production on Some Properties of a Gray Luvisolic Soil." 1-103 Tory Building.

19 March, 12:30 p.m. B. Johnson, "Genotype X Environmental Interactions in White Spruce Populations in Alberta." 1-103 Tory Building.

Music

12 March, 2 p.m. Alfred Fisher, "Some Reflections on Schoenberg the Jew." 1-29 Fine Arts Building.

Education

12 March, 3:30 p.m. Thomas B. Greenfield, Distinguished Visitor, "A Critical Perspective on Theories of Organization." 1-109 Education North.

Botany

13 March, 4 p.m. Jim Fyles, "Ecological Development and Nitrogen and Phosphorous Cycling in Sand Ridge Ecosystems Near Hondo, Alberta." M-137 Biological Sciences Building.

Chaplains' Association

13 March, noon. Gerhard Krapf, "The Faith—Full Music of Bach." 158A SUB.

Sociology

13 March, noon. Steven Kent, "Sex in Sects." 5-15 Tory Building.

Canadian Institute of Ukrainian Studies

13 March, 8 p.m. Radoslav Zuk, School of Architecture, McGill University, "Ukrainian Tradition and the Twentieth Century." 2-115 Education North.

Agriculture and Forestry

14 March, 11 a.m. Marcus Karel, Professor of Food Engineering, Massachusetts Institute of Technology, "Progress in Food Technology: A Status Report and a Look into the Future."

15 March, 11 a.m. Dr. Karel, "Control of Diffusion in Low and Intermediate Moisture Foods." TBW-2 Tory Breezeway.

Salter Reading Series

14 March, 12:30 p.m. Readings by Creative Writing Students (poetry and fiction). 2-42 Humanities Centre.

Gerontology

14 March, 12:30 p.m. G. Robertson, "The Elderly and the Law." 8-14 General Services Building.

Forestry

14 March, 3 p.m. William J. Libby, Department of Genetics, University of California, Berkeley, "Some Likely Effects of Clonal Forestry on Forest Management." 2-1 Mechanical Engineering Building.

Arts

14 March, 4 p.m. J. O'Neill, York University, "Barthes' Body." 5-20 Humanities Centre.

Entomology

14 March, 4 p.m. Glenn Garrison, "A Neuroethological Approach to the Problem of Host Plant Discrimination and Its Evolution in Phytophagous Insects." TBW1 Tory Breezeway.

Clothing and Textiles

14 March, 7 p.m. Anne Lambert, "Klondike Bathing Suits." This seminar will provide a look at bathing suits in the Klondike period (c1898) through slides and original garments. There will be a registration fee of \$20 and early registration is encouraged. For further information and to register, telephone 432-2528.

Business

15 March, 11 a.m. Adrian B. Ryans, University of Western Ontario, "Salesperson Time Allocation Research Program." 1-10 Business Building.

Secondary Education

15 March, 3 p.m. John O'Neill, Professor of Sociology, York University and Adjunct Professor, Centre for Comparative Literature, University of Toronto, "The Joy of Reading and Writing: A Critique of Administered Knowledge." 2-115 Education North.

Club IDC

15 March, 3 p.m. "Seminar on Third World Literature." 4-110C Education North.

Extension

19 March. T.H. White, "Successfully Managing Organizational Change." Sponsored by Public Administration. For further information, call 432-5052.

Slavic and East European Studies

19 March, 3:30 p.m. I. Moravcik, "Agricultural Performance in Eastern Europe and the USSR." 338 Athabasca Hall.

Law and Secondary Education

22 March. A conference on "Minority Language Education Rights and the Constitution." Advance registration required by 15 March. For further information, call the conference committee at 432-5723 or 432-3676. Hotel Chateau Lacombe.

Lutheran Campus Ministry

22 March, 5:30 p.m. The Rev. Dr. Martin E. Marty, Fairfax M. Cone Distinguished Service Professor of the History of Modern Christianity, University of Chicago, will speak at the annual Friends of Lutheran Campus Ministry Dinner on "From the Cathedral's Shelter: Church and University into the 21st Century." For further details, contact Rev. Stephen Larson, Lutheran Campus Pastor, 158C SUB or phone 432-4513.

Music

Department of Music

All events take place in Convocation Hall.

9 March, 8 p.m. A recital of vocal, instrumental, multi-media and electronic music by composer Sherilyn Fritz. Several world premieres will be presented.

10 March, 8 p.m. A piano recital by Helmut Brauss.

11 March, 8 p.m. The University of Alberta Stage Band.

15 March, 8 p.m. A Spring Concert featuring the Concert Choir and the Madrigal Singers. Tickets available at the Department of Music or from members.

Edmonton Chamber Music Society

13 March, 8 p.m. The Berlin Octet will present: Francaix Octet (1972); Rossini Duet for Cello and Double Bass and Schubert Octet in F major, op. 166, D.803. Admission by season membership, available at SUB Box Office and at the door. SUB Theatre.

Exhibitions

Ring House Gallery

Until 14 April. "Contemporary Japanese Prints." An exhibition consisting of 80 prints produced since 1954 by 40 leading Japanese artists.

Until 21 April. "The Second Link: Viewpoints on Video in the Eighties." An international travelling video art show.

Films

Germanic Languages

13 March, 7:30 p.m. "Chinesisches Roulette," in color, (1976). Free admission. Arts 17.

Radio and Television

Radio

All programs broadcast on CKUA radio 580 AM and 94.9 FM.

9 March, 7 p.m. "University Concert Hall" presents the final recital in the Bach organ series. With Delbert Disselhorst, assisted by the University of Alberta Concert Choir, Leonard Ratzlaff, conductor.

Television

All programs broadcast on Shaw-22 and QCTV-19.

13 March, 7:30 p.m. "Canada, the World and the Future: Educating for Technological Change." Desmond Berghofer, Alberta Advanced Education.

13 March, 8 p.m. "Cancer: Proof Positive." A look at the professionalism and facilities at the W.W. Cross Cancer Institute and diagnosis and treatment for the cancer victim.

Matters of Faith

Catholic Campus Ministry

St. Joseph's College Mass Time, September to April. Monday, Wednesday, Friday - 7:30 a.m., 12:10 and 4:30 p.m.; Tuesday, Thursday - 7:30 a.m., 12:30 and 4:30 p.m.; Saturday, 4:30 p.m.; Sunday - 9:30 and 11 a.m., 4 and 8 p.m.

13, 20 March, 7:30 p.m. Shirley Threndyle, The Catholic and the Bible—"Introduction to Sacred Scripture." St. Joseph's College.

Ashes to Easter—shared prayer and faith discussion, Tuesdays (26 February to 26 March) or Thursdays (28 February to 28 March), 7 to 9 p.m. St. Joseph's College, Faculty Lounge. Call Marcia at 433-2275 to register.

Anglican - United Chaplaincy

Bible Study on Gospel of John—Tuesday noon; Anglican Eucharist—Thursday noon. Both events in Meditation Room, 158A SUB.

Lutheran Campus Ministry

Sunday Worship with Eucharist - 10:30 a.m., Meditation Room.
Thursday Evening Worship - 7:30 p.m., Lutheran Student Centre, 11122 86 Avenue.
Noon Hour Bible Study - Wednesdays at noon, Meditation Room.

Faith Share

Mondays, 7 to 9 p.m. Group singing, sharing, teachings and discussions. All welcome. Contact Kim at 436-6346 or Curt at 433-9377 for further information. St. Joseph's Chapel.

Theatre

SUB Theatre

Music

8 March, 8 p.m. The Edmonton Folk Music Festival presents "Connie Kaldor" and mime artist "O.J. Anderson." Tickets available at all BASS outlets.

14 March, 7:30 p.m. "Los Lobos" from East Los Angeles. For further information, call 432-4764.

15 March, 8 p.m. "Johnny Winter." Tickets available at all BASS outlets.

Films

9 March, noon. "Breaker Morant" (1980).

10 March, 8 p.m. "Amarcord."

Studio Theatre

7 to 29 March. "Dreaming and Duelling" will be presented 7 to 9 March at 8 p.m., with a matinee Saturday, 9 March, at 2 p.m. "The Suicide" will run 14 to 16 March at 8 p.m., with a matinee Saturday, 16 March, at 2 p.m. Between 18 and 30 March the two plays will alternate nightly. Tickets available at the Studio Theatre Box Office (3-146 Fine Arts Centre) or at the door. For further information, telephone 432-2495.

Théâtre Français d'Edmonton

9 to 15 March. "Place Au Théâtre." A gathering of eight theatre troupes, will be hosted by the theatre at Faculté Sainte-Jean. Tickets are \$5 and are available at the office and at the door. For further information, call 469-0829.

Notices

Denys Noden to Retire

Denys Noden, Assistant Librarian - Technical Services, is retiring from the University at the end of March after more than 30 years with the Library.

A reception to honor Mr. Noden will be held in the Upper Lounge of the Faculty Club on Wednesday, 27 March, from 3 to 5:30 p.m. All of his friends and colleagues are invited to attend.

Anyone wishing to contribute toward a retirement gift should send a cheque made out to "Denys Noden Retirement Fund" to Mrs. S. Meyer, 5-02 Cameron Library.

Faculty Bonspiel

The Annual University of Alberta Bonspiel hosted by the Faculty Curling Club will be held 23 and 24 March at the Derrick Curling Club, 3500 119 Street. There will be prizes in all three events; the entry fee is \$60 per team.

Staff and students are invited to curl. To register, write to Greg Morrison, Department of Anatomy, or call Greg or Al at 432-3739.

Scholarships, Fellowships and Awards

Noranda Fellowships for Post-Graduate Studies in Science and Engineering

Donor: The Noranda Group of Companies. **Where tenable:** Canada. **Level:** Post-graduate. **Field:** Research related to mining and metallurgy in the following fields: chemical engineering, chemistry, ecology, electrochemistry, extractive metallurgy, forestry, materials science, mineral engineering, mining, physical metallurgy. **Value:** \$12,500 per annum, including \$12,000 for the recipient plus \$500 for equipment and other expenses. **Number:** Unspecified. **Duration:** Awarded on an annual basis, but may be renewable for a total period of two years. **Conditions:** Applications are invited from graduate students holding a bachelor's degree in science or engineering who are interested in pursuing post-graduate studies in the above fields at a Canadian university. In awarding Noranda Fellowships, preference will be given to Canadian citizens. **Closing date:** 1 April 1985. **Further information and application forms should be requested from:** Student Awards Office or Director of Research and Development, Centre de Recherche Noranda, 240 Hymus Boulevard, Pointe Claire, Quebec H9R 1G5.

Welch Foundation Scholarship

Donor: International Union for Vacuum Science, Technique and Applications. **Where tenable:** A laboratory of one's choice. Preference given to applicants who propose to study in a foreign lab in which they have not yet studied. **Level:** Should have at least a bachelor's degree; a doctor's degree

is preferred. **Field:** Study of vacuum science, technique of their application in any field. **Value:** Approximately \$10,000 U.S. funds. **Number:** One. **Duration:** One year beginning 1 September 1985. **Conditions:** Must obtain the authorization of the Chairman of the Welch Committee of the IUVSTA before accepting any additional funds or scholarships during the course of his work under the Welch Foundation. **Closing date:** 15 April 1985. **Further information and application forms should be requested from:** Division of Electrical Engineering, Room 162, Building M-50, National Research Council, Ottawa, Ontario K1A 0R6.

CMHC University Scholarship

Donor: Canada Mortgage and Housing Corporation. **Where tenable:** At Canadian or foreign universities. **Level:** Master's or doctoral degree. **Field:** Fields of architecture, public administration, economics, engineering, law, urban planning and sociology. **Value:** \$11,000 paid in three equal installments. **Number:** Unspecified. **Duration:** Twelve-month period, starting in September 1985. Applicants may apply for renewal of the scholarship as many as three times. **Conditions:** Must be Canadian citizens or have become permanent residents in Canada no later than September 1983. May not hold awards from any other Government of Canada source, but may, with the permission of CMHC, accept additional fellowship assistance from sources other than the Government of Canada. Applications must be submitted on the official 1985-86 form, through the university in which the candidate proposes to enroll. **Closing date:** Applicants should send their completed applications to the university well before 19 April 1985. **Further information and application forms should be requested from:** Student Awards Office or Administrator, Scholarship Program, Canada Mortgage and Housing Corporation, Ottawa, Ontario K1A 0P7.

Surplus Equipment

The equipment appearing in this column is available only to University Departments with University administered funds. For further information about the purchase of equipment or the disposal of your department's surplus equipment, contact Jody Brookwell or Roy Bennett, telephone 432-3208.

For Sale: (1) Apple III, 128K c/w Disk Drives and NEC 12" Character Display
For further information, telephone A. Rhemtulla, 432-4565.

Positions Vacant

The University of Alberta is an equal opportunity employer but, in accordance with Canadian Immigration requirements, these advertisements are directed to Canadian citizens and permanent residents.

Administrative and Professional Officer, Department of Music

Applications are invited for the position of Administrative Officer in the Department of Music.

Reporting directly to the Chairman, the APO is responsible for the preparation and control of the Department's budgets (Capital and Trust), non-academic staff supervision, general office administrative support, management of Convocation Hall, authorization of the preparation and dissemination of public relations material and supervision of special projects within the Department.

This position requires close liaison with the community, government and business sectors.

Education: A post-secondary degree is required; preference will be given to candidates with a strong background in music and/or business; experience in administration and arts promotion is desired.

Salary: \$25,839 to \$38,763 (1984-85).

Expected appointment date: 1 May 1985.

Closing date for applications: 1 April 1985.

Applications, including a résumé and the names of three references, should be sent to: Dr. R.A. Strangland, Chairman, Department of Music, 3-82 Fine Arts Building, University of Alberta, Edmonton, Alberta T6G 2C9.

CAB Cafeteria Manager

The Department of Housing and Food Services requires a manager for its CAB Cafeteria. Reporting to the Food Services Officer, the incumbent will manage all aspects of the CAB Cafeteria operation, including a high quality "front of house" program as well as the preparation of a varied and nutritious menu for students and staff. The incumbent will also recruit and supervise staff, purchase food ingredients, assist with budget administration and proactively control labor and food costs.

This demanding position requires an individual who has a related university degree and/or a diploma in Hotel/Restaurant Administration. We are seeking someone with a minimum of 3 years directly related experience in large, unionized, institutional food service dining operations.

The salary for this position is \$27,334-\$41,002 per annum. Please apply by résumé to: The Personnel Officer, Housing and Food Services, 04 Lister Hall, University of Alberta, Edmonton, Alberta T6G 2H6.

Non-Academic Positions

The non-academic hiring freeze has been partially lifted effective 12 February 1985. Until 31 March 1985, only current non-academic, operating funded employees and layed-off staff, subject to recall, may be considered for regular appointment on these posted vacant positions (). Trust/Research funded positions are exempt from Hiring Freeze policies.*

To obtain further information on the following positions, please contact Personnel Services and Staff Relations, 2-40 Assiniboia Hall, telephone 432-5201. Due to publication lead time and the fact that positions are filled on an on-going basis, these vacancies cannot be guaranteed beyond 1 March 1985. For a more up-to-date listing, please consult the weekly Employment Opportunities Bulletin and/or the postings in PSSR.

Positions available as of 1 March 1985.

Clerk Steno III (Term) (\$1,294-\$1,625) Extension
***Clerk Steno III (\$1,294-\$1,625)** Geography
***Clerk Steno III (\$1,294-\$1,625)** Student Counselling Services
Administrative Clerk (Term) (\$1,442-\$1,842) Extension
***Departmental/Executive Secretary (\$1,625-\$2,092)** Nursing
***Departmental/Executive Secretary (\$1,625-\$2,092)** Applied Sciences in Medicine
Technician I (Trust/Term) (\$1,497-\$1,920) Medicine
Biochemistry Technologist I (Trust) (\$1,697-\$2,182) Cancer Research Group
Technician II (Trust/Term) (\$1,697-\$2,182) Medicine
Editorial Assistant (Trust) (\$1,766-\$2,280) Medicine—Scientific Affairs
Programmer Analyst I (Trust) (\$1,842-\$2,378) Educational Research Services

*Technician III (Term) (\$1,920-\$2,486) Pharmacology

For vacant library positions, please contact the Library Personnel Office, Basement, Cameron Library, telephone 432-3339.

Advertisements

Advertisements must reach the Editor by 3 p.m. on the Thursday prior to publication date which date also serves as the deadline for cancellation of advertisements. The cost of placing advertisements is 30 cents per word with no discount for subsequent insertions. There is a maximum limit of 30 words and a minimum charge of \$1.50. Contributors' corrections will be assessed at \$1.50 for each line in which an insertion is made. Advertisements cannot be accepted over the telephone. All advertisements must be paid for in full at the time of their submission.

Accommodations available

Rent - Sabbatical house, four bedrooms plus study plus two bedrooms in basement. Belgravia (1 km from campus), August 1985-July 1986. 432-3637, 436-2627.

For sale - Lot in luxury development, 1 km east of Jasper Park gate. Gas, electricity, cable T.V., sewer. Spectacular view. 433-5939 after 6 p.m.

For sale - Immaculate, Parkallen home. Hardwood floors. Three, large bedrooms. Newer garage. \$75,000. Call Agnes Fisher, ReMax Realty, 438-1575, 434-4080.

For rent - April first, opposite Corbett Hall, modern side duplex. Two bedrooms, all appliances, attached garage, fenced, south yard, Phone 436-1873.

Rent - Furnished house available, St. Albert, 15 June-30 August (approximately). Rent negotiable. 459-9583 evenings.

For sale - Super bungalow, Belgravia. Three-

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bedroom suite. Immaculate. Resi Richter, Royal LePage, 483-9432.
For sale - Westend, view property. 2,450 sq. ft., pool, hottub, sauna. Resi Richter, Royal LePage, 483-9432.
For sale - Inglewood, fourplex, central location, good investment. Resi Richter, Royal LePage, 483-9432.
For sale - Executive houses Valleyview, Laurier, Westridge, Lessard. Super location, quality built. For details, call Resi Richter, Royal LePage, 483-9432.
Rent - Basement suite in Garneau area. Large living area, bedroom, kitchen, bathroom. \$325/month, utilities included. 432-0123.
Rent - Sabbatical, July 1985-June 1986. Four bedrooms, furnished house, westend. Car available. Twelve minutes to University. 432-8717.
Rent - May through August. Furnished house, two bedrooms, study. Parkallen. \$400/monthly. 435-8251, 432-5174.

Rent - Low rent to careful tenants. Twelve-minute drive to University. Three-bedroom sabbatical house, with or without vehicle. Furnished or partially furnished. May 1985-September 1986. 471-5711.
Rent - Six-bedroom house. Three blocks from University. Large kitchen, dining room, living room, three-car pad, fenced yard, fully furnished. Car available. 1 July-31 August. 10953 86 Ave. 433-9670, 483-4394.
Private sale - Second level condominium, 900', master-bedroom, den, fireplace, dishwasher, washer/dryer, on University bus route, five minutes from West Edmonton Mall, kitty-corner to Safeway/shopping mall. 487-8285.
Rent - Quality, two-bedroom home with one-bedroom basement suite. Garage. University area. 432-7911, 436-0502.
Sale - Tall trees plus bungalow, double garage and garden spot. Quick access to University, down-

town and hospital. Ask for Pat von Borstel, Spencer's, 436-5250, 437-6540.
Sale - Renovated home overlooking Millcreek Ravine. Upgraded, modern kitchen. Patio doors, deck, fireplace, living room. Must to view. Call Joyce Byrne, 435-6064, 436-5250.
Sale - Adjacent to University campus, overlooking park. Spacious, newly renovated house. Four bedrooms, study, sitting and dining rooms, 1 1/2 baths. Phone 433-1980 after 10 March. No agents.
Goods for sale
Rent to own, new Royal electronic typewriters or purchase used selectrics at Mark 9, HUB Mall, 432-7936.
Used, 13 cu. ft., frost-free, Kenmore refrigerator. Almond. Excellent condition. New \$730, now \$450. Days, 432-2826. Evenings, 439-2210.
New 20" RCA color T.V. for sale. Best offer. Call after 8 p.m., Steven or Joanne, 435-7682.

Hayes, 300 Baud modem for Apple II+. Perfect file transfer capability to MTS. \$195, including software. Cliff, 461-1043, evenings.
Books bought and sold - The Edmonton Book Store in HUB Mall will pay cash for book collections and individual, rare items. Appraisals available. Open seven days a week. 433-1781.

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Keys To Canada 1985

Tuesday, March 12, 7-10 p.m.
Chateau Lacombe, Edmonton

Speakers: John J. Gill, Immigration Lawyer
L.E. Winchester, Canada Immigration

Adults — \$10
Students — \$5

Your questions and concerns covered
Limited seating available
Register today by calling Linda at — 451-5870

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Mr. Stephen Lewis

Canada's Ambassador
to the University Nations

will address the topic

"The United Nations at 40"

Monday, March 18, 8:00 p.m. SUB Theatre

Sponsored by:

United Nations Association of Edmonton
Political Science Undergraduate Association
International Student Centre

The Faculty of Dentistry's Division of Continuing Education is pleased to present the following lecture which is sponsored by the Canadian Fund for Dental Education.

The Intellectual and Moral Marks of the Professional
by

William May, Ph.D.

Joseph P. Kennedy Professor of Ethics
Georgetown University
Washington, D.C., U.S.A.

Time: 7:00 P.M. March 13th, 1985

Place: Bernard Snell Hall,
Walter Mackenzie Health Sciences Centre

For free tickets, please contact Dr. Alex Bene or Ms. Debbie Michalchuk at 432-5023.

Dr. May graduated from Princeton University in 1943 and received his Bachelor of Divinity degree (B.D.) *magna cum laude* (1952) and Ph.D. (1962) degrees from Yale University. Professor May served as the founding chairman of the Department of Religious Studies at Indiana University and as chairman of the Religion Department at Smith College, Northampton, Massachusetts. He has published essays on religion, politics and biomedical ethics and is author of *A Catalogue of Sins* (Holt, Rinehart and Winston) and monograph on *Professional Ethics: Setting, Teacher and Terrain*. Recently he served as an author and consultant to a National Science Foundation project on the "Ethics of Field Research in Anthropology and Sociology". Dr. May received a Guggenheim Fellowship (1978-79) to work on the public obligation of the professional. Westminster Press published his book, *The Physicians Covenant: Images of the Healer in Medical Ethics* in November 1983.

Thesis special - Word processing, \$15/hour. City Secretarial Service, 432-0138.

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Come to a practice job interview and discover your strengths and weaknesses. A research project needs volunteers for this once-in-a-lifetime opportunity. Contact Sheila, 432-5385 (days), 435-1110 (evenings).

Academic staff: Supplementary healthcare reimburses treatment costs for backaches, stress tension at Back Basic Therapy. Maria Krieg, university-trained in Düsseldorf, offers: Heat, massages, chirogymnastics, interferential electrotherapy. 436-8059. 11610 75 Ave.

Colour charm - Enhance yourself with colour. Learn the colours, makeup that best suit you for your season. Contact Pamela Trosko, Colour Consultant, 438-8078.

Competent house cleaning service, licenced and insured. For information, phone 424-8490.

Parents seek experienced childcare person to care for our two-year-old, beginning April. 4 1/2 days/week in our home near University. We have friendly dog. References. 435-8209 evenings/weekends.

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St. Joseph's College

ACADEMIC MASS

Tuesday, March 19, 1985 — 4:00 p.m.

Celebrant: Archbishop MacNeil

Faculty are invited to wear Academic Costume
Reception after Mass in the Faculty Lounge.



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